



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent ap	pplication of
Applicant: Serial No.: Filed: For: Art Unit: Examiner:	Renato Barrera, et al. 10/803,443 March 18, 2004 Query Optimizer Using Implied Predicates 2171 Unknown
•	INFORMATION DISCLOSURE STATEMENT
	nissioner for Patents eginia 22313-1450
Sir:	
patents, publica except for: (a) upon which this	t to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the tions and other information listed on the attached PTO-1449. A copy of each listed document is enclosed pending applications or (b) those previously cited or submitted to the Office in the following application(s) application relies for an earlier filing date under 35 U.S.C. 120; or (c) U.S. Patent(s) and published since the subject application was filed after June 30, 2003.
Serial No.: Filing Date:	
Applicant(s) be	document, publication or other information for which a date is not given on the attached PTO-1449, lieve(s) the same may qualify as "prior" art to this application and should be treated accordingly, although serve(s) the right to contest the prior art status of any document, publication or information, should issue arise.
	ng each listed document that is not in the English language, an English-language translation accompanies this dicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the ment(s):
(a)(Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
(b)	Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".
3. Pursuant	t to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):
(a) <u>X</u>	Within 3 months of the filing date or date of entry into the National Stage.
(b)	Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1063 for consideration of this Statement.

	(c) After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.
	(1) The required certification is given below, or
	(2) Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or
	(3) Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1063.
	(d)After the mailing date of either a final action or a notice of allowance, but before payment of the issue fee. Petition hereby is made for consideration of this Statement and the required certification is indicated below.
	(1) Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(i)(1), or
	(2) Charge the fee set forth in 37 C.F.R. 1.17(i)(1) to Deposit Account No. 50-1063.
4.	Certification (if applicable)
	(a) The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.
	(b)The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.
5.	The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1063.

Respectfully Submitted,

Jeffrey R. Sadlowski

Reg. No. 47,914

24TH Floor, National City Center 1900 East 9th Street Cleveland, Ohio 44114 (216) 696-8730

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Assistant Commissioner for Patents, Alexandria, Virginia 22313-1450

Date: 6-17-2004

Jeffrey R. Sadlowski

PTO/SB/08A (08-03) Approved for use through 07/31/2006. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of

Complete if Known					
Application Number	10/803,443				
Filing Date	March 18, 2004				
First Named Inventor	Renato Barrera				
Art Unit	2171				
Examiner Name	Unknown				
Attorney Docket Number	MS301563 1/MSETP576US				

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
	ļ	Number-Kind Code ² (f known)			Figures Appear
		^{US-} 5301317	04-05-1994	Lohman, et al.	
		^{US-} 5,551,027	08-27-1996	Choy, et al.	
		^{US-} 5,664,063	09-02-1997	Johnson, et al.	
		^{US-} 5,668,966	09-16-1997	Ono, et al.	
		^{US-} 5,671,403	09-23-1997	Shekita, et al.	
		^{US-} 5,778,354	07-07-1998	Leslie, et al.	
		^{US-} 5,819,255	10-06-1998	Celis, et al.	
		^{US-} 5,893,911	04-13-1999	Piskiel, et al.	
		^{US-} 5,960,194	09-28-1999	Choy, et al.	
		^{US-} 6,012,054	01-04-2000	Seputis	
		^{US-} 6,353,821	03-05-2002	Gray	
		^{US-} 6,516,310	02-04-2003	Paulley	
		^{US-} 6,578,018	06-10-2003	Ulyanov	
		^{US-} 6,665,664	12-16-2003	Paulley, et al.	
		^{US-} 6,675,159	01-06-2004	Lin, et al.	
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	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages		
		Country Code ^{3 -} Number ^{4 -} Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T ⁶	
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				Application Number	10/803,443	
	_		CLOSURE	Filing Date	March 18, 2004	
STATEMENT BY APPLICANT			PLICANT	First Named Inventor	Renato Barrera	
(Use as many sheets as necessary)				Art Unit	2171	
	(000000111111)			Examiner Name	Unknown	
Sheet	2	of	2	Attorney Docket Number	MS301563.1/MSFTP576US	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		S. SHEKHAR, B. HAMIDZAHEH, A. KOHLI, and M. COYLE. Learning transformation rules for semantic query optimization: A data-driven approach. IEEE Transactions on Knowledge and Data Engineering, Vol. 5, No. 6, 1993. 29 pages.	
		S. CHAUDHURI. An overview of query optimization in relational systems. In Proceedings of ACM PODS Conference, pp. 34-43, 1998.	
		P. ROY, S. SESHADRI, S. SUDARSHAN, and S. BHOBE. Efficient and extensible algorithms for multi query optimization. In Proc. of ACM SIGMOD, pp.249-260, 2000.	
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Examiner	Date	
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